

Smartline

► Preparative Pump 1800



Powerful and reliable pump for preparative HPLC

The Preparative Pump 1800 delivers stable and precise solvent flow for semi-preparative as well as preparative HPLC applications. By adding one or more additional pumps, binary, ternary or even quaternary high-pressure gradient systems can be easily configured. The pump can also be equipped with a binary or ternary gradient valve block to configure cost-effective low-pressure gradient systems.

Adaptable – Exchangeable pump heads for flow rates up to 1 000 ml/min and pressures up to 400 bar make it possible to easily optimize the pump to changing performance requirements and allow for simple maintenance. Available in stainless steel or biocompatible titanium versions, the pump heads enable a wide range of applications.

Reliable – Engineered for durability and built with high quality components and materials, the Preparative Pump 1800 is a dependable eluent delivery solution for preparative HPLC. Automatic piston seal wash is a standard feature for extended seal lifetime.

Superior separations – Electronic drive compensation guarantees low pulsation for improved baselines and outstanding HPLC results.

Compact – The compact design fits seamlessly with all KNAUER Smartline instruments, making configuration flexible while saving valuable bench space.

Upgradeable – Full gradient support in both standalone or software-controlled modes for applications requiring changes in solvent composition during runs or for automated column reconditioning.

Flexible control – As part of a complete purification solution controlled by KNAUER ChromGate® FRC or ClarityChrom® Prep software, advanced fraction collection possibilities are supported, as well as eluent recycling, peak recycling and much more. For operation with or without KNAUER software, the Pump 1800 also offers eight programmable event outputs for extensive switching tasks or control of other instruments.

Thanks to its numerous features and available options (including pump head heating or cooling, an 8-fold pump head for 8 parallel flows up to 50 ml/min each, special pump head versions for extended chemical compatibility and more), the Pump 1800 can also be used for other high pressure liquid pumping tasks aside from chromatography applications.

Technical data

Flow properties

Delivery system double piston pump

Pump head	Flow rate range	Max. pressure
100 ml/min	0.1–99.9 ml/min	400 bar (40 MPa)
250 ml/min	0.1–249.9 ml/min	200 bar (20 MPa)
500 ml/min	0.1–499.9 ml/min	100 bar (10 MPa)
1 000 ml/min	0.1–999.9 ml/min	50 bar (5 MPa)

Flow rate accuracy ± 2% within 5–50% of flow range; methanol/water 80:20, v/v

Flow rate precision RSD ≤ 0.1%

Pulsation electronic compensation of residual pulsation

Gradients high pressure gradient: binary, ternary, quaternary gradients possible (one master pump with up to 3 slave pumps)

low pressure gradient: binary and ternary gradients possible with LPG block accessory (see below)

Technical parameters

Display LCD, 2 lines, 24 characters each

System protection soft start, P_{min} and P_{max} adjustable

Control 2 RS-232 interfaces, 2 remote control strips, analog signals, touchpad

Programming max. 20 programs (1 configurable as emergency program) + 9 program links

GLP function detailed report

Power supply 115/230 V, 47–63 Hz, max. 450 W

Dimensions 220 x 185 x 400 mm (W x H x D)

Weight 10.1 kg

Ordering information

Preparative HPLC Pump 1800

incl. pump head		100 ml/min	250 ml/min	500 ml/min	1 000 ml/min
Stainless steel version	Order no.	A50501	A50511	A50521	A50531
Titanium version (biocompatible)	Order no.	A50503	A50513	A50523	A50533
Titanium version with Kel-F® check valves*	Order no.	A50502	A50512	A50522	A50532

Interchangeable pump heads

		100 ml/min	250 ml/min	500 ml/min	1 000 ml/min
Stainless steel version	Order no.	A4029-1	A4021-1	A4038-1	A4022-1
Titanium version (biocompatible)	Order no.	A4029V2	A4021V2	A4038V2	A4022V2
Titanium version with Kel-F® check valves*	Order no.	A4029V1	A4021V1	A4038V1	A4022V1

*Standard pump head is equipped with PEEK check valves. Kel-F® check valves are recommended for use with strong acids.

Order no. Accessories

A4099-1	ternary low pressure gradient valve block, stainless steel, 10–220 ml/min
A4094-1	binary low pressure gradient valve block, stainless steel, 10–1 000 ml/min
A2034-1	pump head heating and cooling device
A4036	8 channel pump head for parallel flow applications, 8 x 0.1–50.0 ml/min, 200 bar (20 MPa)
A1121	inlet merging device for 100 ml/min and 250 ml/min pump heads
A0581	dynamic eluent mixer (preparative), stainless steel, 5.9 ml chamber volume
A2515	4.8 ml volume extension kit for dynamic mixer, includes seals and screws

Technical data are subject to change without notice.

Visit www.knauer.net for details on complete HPLC systems, HPLC columns, and osmometers.

Wissenschaftliche Gerätebau
Dr. Ing. Herbert Knauer GmbH
Hegauer Weg 38
14163 Berlin, Germany



Your local distributor:

Phone: +49-(0)30-80 97 27-0
Telefax: +49-(0)30-8 01 50 10
E-Mail: info@knauer.net
Internet: www.knauer.net